FALSE PREMISES, FALSE CONCLUSIONS:
A RESPONSE TO AN ATTACK ON UNIVERSAL SERVICE

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1. Introduction

Western Wireless filed a study conducted by Economics and Technology, Inc. (ETI) that purports to demonstrate that rural incumbent local exchange carriers (RLECs) are inefficient, and that these inefficiencies are the source of growth of the Universal Service Fund (USF) in the United States.[2] I will show that the ETI study is fundamentally flawed: its premises are false, its conclusions do not follow from its analyses, and the conclusions themselves are poor universal service policy. The availability of telecommunications and information services in rural areas would be jeopardized by the suggestions of ETI. The real purpose of the ETI study is to divert attention away from a major threat to universal service – the position taken by Western Wireless that wireless carriers are entitled to support levels that are equal to those received by the RLECs.

My analysis proceeds in four sections. Section 2 briefly explains the ETI position. I will highlight the major features of their purported case for asking the FCC to abandon both rate-of-return regulation and the use of embedded costs for determining RLECs' high cost support amounts. Section 3 contains a critique of the macro perspective taken by ETI on the size and growth of the USF. Section 4 is a detailed examination of the micro analyses conducted by ETI of the overhead costs of RLECs. Section 5 contains conclusions, including an explanation of why mandatory incentive regulation is not advisable for the RLECs. Paradoxically, the ETI study does demonstrate why it is <u>not</u>

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[2] *Lost In Translation: How Rate of Return Regulation Transformed the Universal Service Fund for Consumers into Corporate Welfare for the RLECs*, Economics and Technology, Inc., February, 2004.

appropriate to provide wireless competitive eligible telecommunications carriers (CETCs) with support that is equal to the support received by the RLECs.

2. The ETI Study: "Lost in Translation"

The abridged version of the ETI report is that

- USF growth is due to inefficiency and waste by RLECs which results from the use of rate-of-return regulation and embedded costs.
- An examination of RLECs' overhead expenses "proves" that they are inefficient. Overhead expenses vary considerably across RLECs of similar sizes. However, overhead expenses should not vary much across similar-size companies.
- A number of case studies illustrate this inexplicable variability further.
- This "evidence" of waste also applies to all other aspects of RLEC operations.
- Hence, current USF payments to RLECs are bloated and unnecessary. Replacing rate-of-return regulation with price cap regulation and embedded cost with forward-looking cost are the solutions.

The above story is replete with false premises that lead ETI to false conclusions. If anything was "lost in translation" it was the truth about RLECs and the USF. The ETI study contains no defense of its assumptions regarding the appropriate variability of overhead costs nor does it provide any evidence regarding the level or variation in overhead costs in other industries. I will examine such evidence in Section 4, showing that the RLECs' overhead costs are neither particularly high nor particularly variable. Indeed, most of the variability asserted by ETI results from their incorrect analysis of the National Exchange Carrier Association (NECA) USF cost data – they have failed to account for the true size of the holding companies with multiple study areas. Once this factor is included, much of the "inexplicable" variability disappears. First, however, I turn to the erroneous picture of the growth of the USF presented in the ETI study.

3. Macro Perspective

The ETI macro perspective of the USF is succinctly expressed in the following excerpt:

> Total annual High Cost Fund support flowing to the RLECs has grown beyond any expectations at the time the fund mechanisms were established. In 1986, total High Cost Fund disbursements amounted to about $55 million. Less than twenty years later (during which time the telecom industry generally experienced significant productivity improvements) projections for 2004 call for disbursements of $3.6-billion.[3]

This "growth" in high cost funding is an illusion: ETI has failed to represent the significant shift from implicit to explicit support. The 1986 disbursement of $55 million was merely the first year of an eight-year transition to full funding and only represents the High Cost Loop Support (HCLS) mechanism. Long Term Support (LTS) was not introduced until 1989 and Local Switching Support (LSS) (previously known as DEM Weighting) was not introduced until 1993. The transition to explicit support has continued: in 2000 and 2002, respectively, the FCC introduced two new support mechanisms to the high cost program – Interstate Access Support (IAS) and Interstate Common Line Support (ICLS). These mechanisms removed what the Commission believed to be implicit support built into interstate access charges and shifted recovery of those revenues to explicit support mechanisms within the USF. In 2003, these mechanisms added more than $1 billion to the funding requirement for the high cost program.

Further, ETI's analysis of the explicit mechanisms is seriously flawed.   The apparent 62% increase in total USF incorrectly includes support being received by CETCs. In addition, the percentage increase is small compared with the percentage growth in CETC support. But most importantly, it is a meaningless comparison. ETI has totaled first year funding for mechanisms that were initiated in different years.[4] These mechanisms were largely replacements of implicit support with explicit support, and the different start years

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[3] *Lost in Translation*, at page 7.

make comparisons of nominal dollar magnitudes misleading, so it makes no sense to total them. At best, such a comparison merely reveals the extent to which formerly implicit support has been replaced by explicit support.

In Table 1, I show the original ETI table[5] (the heavy shaded box on the top left) along with a corrected set of data for the incumbent LECs. I also base the 1989 LTS funding on the calendar year amount filed by NECA, of $312 million (rather than the 9 month total of $235.7 million). I also separate out CETC high cost support

A more meaningful analysis of the high cost program is one that looks at the change in each mechanism over its life, and compares it with the rate of inflation (% change in the consumer price index) over that period, and with the change in the number of supported ILEC lines over that same period. I show these in the right hand columns, as well as the total inflation-adjusted per line support change for each program. This analysis shows that the increases in total LTS and LSS virtually reflect the effects of inflation while, at the same time, total lines were increasing substantially. Hence there is actually a sizeable decrease in real per line support distributed under these mechanisms. ICLS, on the other hand, shows a modest increase for its short history.[6]

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[4] In addition, ETI's "first full year" of funding for LTS is actually for only 9 months.
[5] *Lost in Translation*, Table 1.2, page 9. Note that this table shows aggregate figures for these mechanisms and does not disaggregate by rural/nonrural carriers. I show more disaggregated results in Table 2 below.
[6] ICLS was implemented in two phases to coincide with the phase out of the carrier common line (CCL) access charge. Approximately $28 million of the ICLS increase since July 2002 can be attributed to the elimination of the CCL charge effective July 2003.

Table 1: Misleading ETI Data and Corrections

Program	ETI Data ($ millions)			Corrected: 2004 ILEC support	% increase	% change in ILEC lines	% change in CPI	% change in real per line support[7]
	Year instituted	First full year funding	2004 projected					
LTS	1989	235.7 ($312 was the full year amount)	571.6	485.2	55% (using the full year 1989 base of $312)	33%	52%	-36%
LSS	1993	311.0	465.63	400.3	29%	18%	31%	-20%
ICLS	2003	372.34	453.29	406.1	9%	-3%	2%	10%
Total		919.04	1,490.52					
% increase		62%						
CETC support	2002 (4Q '02 – 3Q '04 annualized)	61.32	323.36					
% increase		427%[8]						

After making the necessary corrections to the ETI table, what stands out is that the growth rate of support being received by CETCs is far more alarming than the growth rate in ILEC support. A more refined "apples-to-apples" comparison is obtained by focusing solely on the HCLS, which shows the same picture of CETC support driving increases in USF:

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[7]These calculations are based on the 52% increase in the CPI from 1989 to 2004, a 31% increase in the CPI from 1993 to 2004, and a 5% increase in the CPI from 2002 to 2004. I used the total ILEC lines (since the FCC does not report rural lines separately) of 131.5 million in 1989, 148.1 million in 1993, and 175 million in 2004. The growth rate of RLEC lines has roughly paralleled the growth rate of total ILEC lines over time.

[8] Data is from USAC High Cost Appendix HC01- High Cost Support by State by Study Area for 4Q 2002 and 3Q 2004. I based the CETC support only on eligible CETCs and multiplied the quarterly support by four to get an annual estimate.

Table 2: High Cost Loop Support for Rural ILECs and CETCs

	2003 (based on 4Q projections)		2004 (based on 3Q projections)	
	High Cost Loop Support	Supported Lines	High Cost Loop Support	Supported Lines
RLECs	$1060.4 million	21.6 million	$1062.4 million	21.6 million
2003-04 growth			0.2%	0%
CETCs	$72.1 million	1.1 million	$192.4 million	2.6 million
2003-04 growth			166.9%	136.4%

The rapid increase in funding for the CETCs is evident. While the RLECs still receive the majority of HCLS, the CETCs' share of this support is now over 15% of the total (annualized), up from 6% less than one year ago. Overall high cost loop support for the RLECs increased by 0.2% from 2003 to 2004. Thus, it is not accurate to portray the RLECs as experiencing increasing costs nor is it accurate to portray them as the cause of the lion's share of the increases in the overall USF.

It is fair to say that CETCs are the ones driving the increases in the high cost program. From the first quarter 2004 to the second quarter 2004, CETC support growth accounted for 86% of the total growth in the high cost portion of the USF.[9] Thus, the real growth in the high cost program is attributable to the CETCs and their share of the fund can no longer be considered to be negligible.

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[9] ILEC support grew by $3.5 million while CETC support grew by $21.5 million. This data is for all high cost support programs (does not include low income support or schools and libraries support).

4. Micro Perspectives

The assumption that corporate overhead expenses should vary little, after adjusting for firm size, conflicts with both logic and evidence.

First, overhead costs should vary with network costs. Rural America is diverse and overhead cost levels are but one manifestation of this.[10] Remoteness does contribute to corporate operations expenses. Travel expenses and specialized labor may be more costly in remote areas. The extent to which the company depends on the federal jurisdiction for cost recovery through access charges and the USF may impact its expenditures to participate in regulatory/legislative/industry processes that will potentially affect this critical source of revenue. In addition, many overhead expenses are "lumpy" where they may be large in one year and small in other years (e.g., rate cases create such volatility for RLECs).   There is also variability among state commissions in the regulatory burdens that they place on RLECs. Of course, company size should also impact the level of overhead cost.   This last feature is the only one that ETI acknowledges as a valid reason for variability of overhead costs.

Evidence from other industries, particularly unregulated industries, reveals that variability of overhead costs is both common and significant.   In fact, wireline telecommunications carriers show lower levels of overhead costs than do other industries. Consistent publicly available data is only available for relatively large companies,[11] but I show the average Sales, General and Administrative overhead (SG&A) as a percent of total operating expenses for 57 industries for the year 2003. Note that the Wireless Telecommunication Services industry has higher overhead levels than the Diversified Telecommunication Services industry (mostly wireline carriers).

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[10]*Rural Difference*, Rural Task Force White Paper #2, 2000 demonstrates the diversity of rural areas.
[11] This data comes from the Russell 3000: publicly traded companies with annual sales exceeding $200 million.

Figure 1: Average Overhead Costs, as a percent of total operating expenses, for 57 Industries
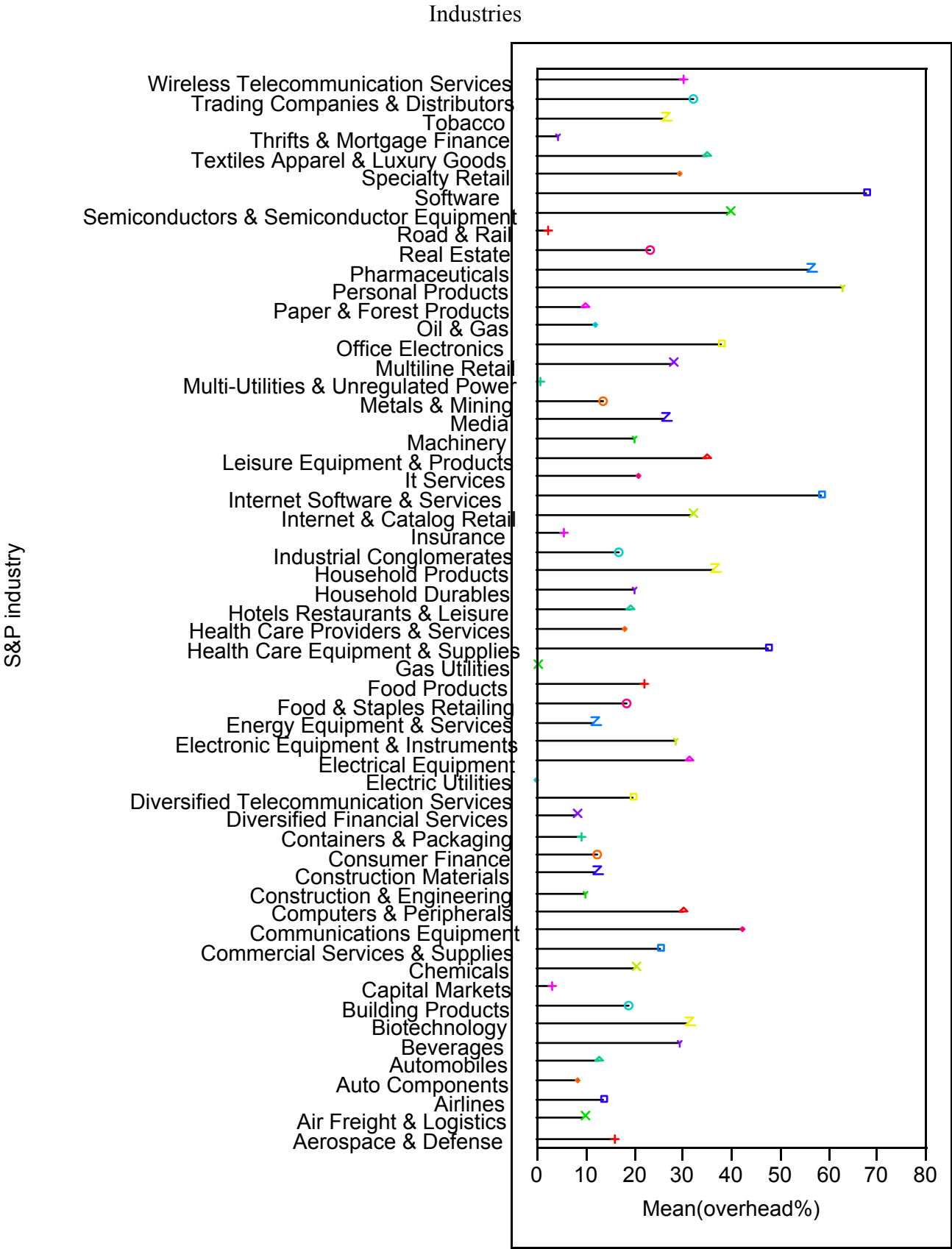
A good measure of the variability of a data series is the *Coefficient of Variation*, calculated as the standard deviation divided by the mean of the series. This measure is without scale – it shows how the standard deviation (the fundamental measure of variability) compares to the mean. When the standard deviation approaches the mean in magnitude (*i.e.,* the coefficient of variation approaches one), it indicates considerable variability in the data. For the cross-industry data, the coefficient of variation for Diversified Telecommunication Services is .81 compared with an average of .96 for all industries. In fact, the Diversified Telecommunication Services industry ranks as the 18th lowest of the 57 industries shown in the chart. The RLECs (with less than 20,000 lines, after aggregation to the holding company level, as explained below) show a coefficient of variation of .83. This is still well below the average for all industries combined, most of which are generally unregulated, and despite the much smaller size of these RLECs.[12] Figure 1 is meant to dispel the notion that overhead expenses should be expected to vary little. In unregulated environments, they evidence a wide degree of variation.

The variability of overhead cost is reinforced by an examination of the components of what is reported as "Corporate Operations Expenses." Appendix 1 contains the description of the Part 32 account for "General and Administrative" expenses. Notable among the included expenses are negotiations, investor relations, legal services, long-term planning, and pension and health care benefits (for retired employees). What is significant about these categories is that they are likely to vary considerably across similar size companies depending on their history, present circumstances, and future opportunities. For example, a family-owned business may look very different than a cooperative in terms of future options. Negotiations expenses may be highly variable depending on whether a significant network expansion is planned, a competitor has entered a market, or there has been a lawsuit or an accident claim. It is not a realistic expectation that similar size companies will have similar expenses of the types listed.

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[12] The RLEC data is for total corporate operations expense while the data for the Russell 3000 is for SG&A. The coefficient of variation can still be compared, since it equals the standard deviation divided by the mean, and both of these statistical parameters will be larger if marketing expenses are included in the measure of overhead. This is the sense in which the coefficient of variation is a scale-less measure.

I also have compared overhead costs between wireline and wireless carriers, using the broader measure of SG&A expenses. (This measure adds the marketing costs to the corporate operations expenses available from ARMIS data.) Since the wireless carriers for which data is publicly available are large, I confine this comparison to the larger wireline carriers.

Figure 2: SG&A Expenses by Total Subscribers for Wireless and Wireline Carriers
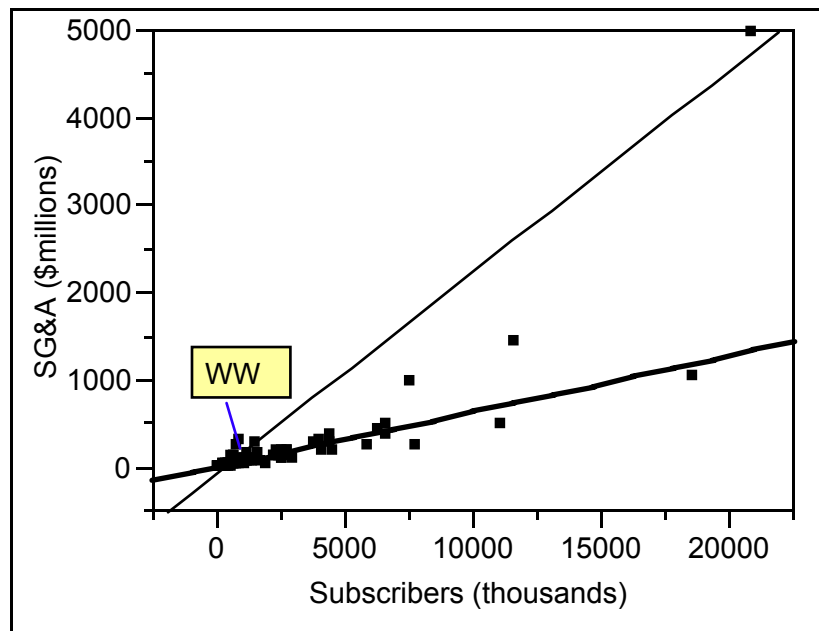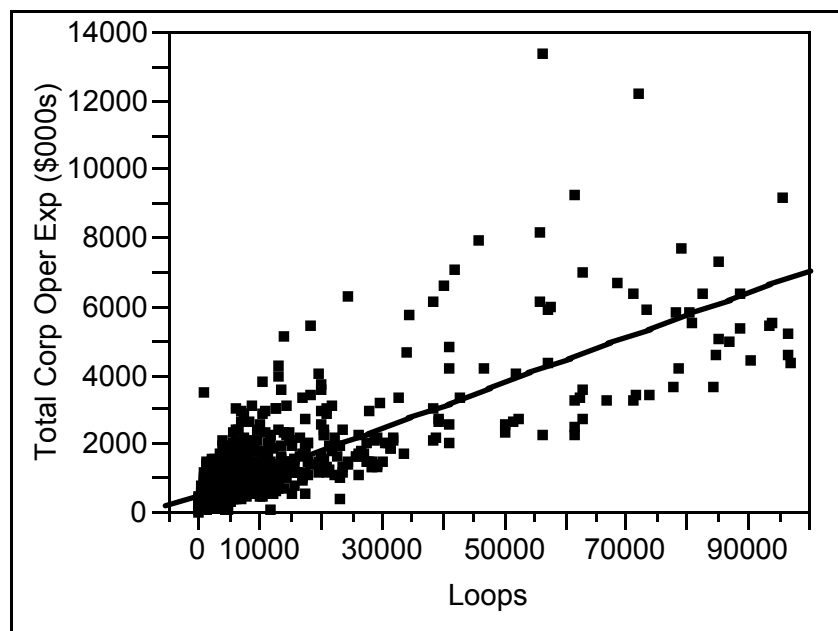

The bold line shows the least squares regression relationship for the 95 larger wireline carriers and the dashed line shows the relationship for the 15 wireless carriers. Western Wireless is indicated for its relatively high level of overhead expense. In general, the wireless industry shows a higher level of overhead expense as a function of total subscribers than does the wireline industry.[13] While this comparison suggests that wireless carriers may have higher overhead levels than wireline carriers, it illustrates another problem with the ETI analysis. The wireline carrier data is reported by study area, not by holding company. Thus, each RBOC is shown above as multiple companies of different sizes, rather than as a single company. This problem with the data plagues the ETI study of RLEC overhead costs. It is essential to correct the data for holding

company size before meaningful comparisons can be derived. I will do that and then return to the Western Wireless data that shows SG&A expenses of $121 per subscriber for the 1,197,000 subscribers indicated in their 2002 10-K report.

ETI presents a graphical analysis of overhead costs based on company size. Figure 3 shows this for RLECs with less than 100,000 lines (837 study areas) in 2003:

Figure 3: Total Corporate Operations Expense as a Function of Total Loops

A natural measure of variability in overheads is based on the R^2 of the least squares regression line. The regression line is shown in Figure 3 and R^2 measures the percent of the variation in overhead expense that is accounted for by the variation in total loops.[14] R^2 is .64 in Figure 3, meaning that 64% of the variation in overhead is accounted for by the variation in company size. In other words, 36% of the variability in overhead is not explained by the size of the company.

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[13]I used total loops for the wireline carriers and total subscribers reported by the wireless carriers.

The extent of variability is larger when looking at even smaller companies. The ETI report contains several graphs showing companies with less than 20,000 lines (714 study areas). In this case, Figure 4 shows the overhead/total loop relationship:

Figure 4: Overhead Costs and Total Loops for Rural ILECs with less than 20,000 lines
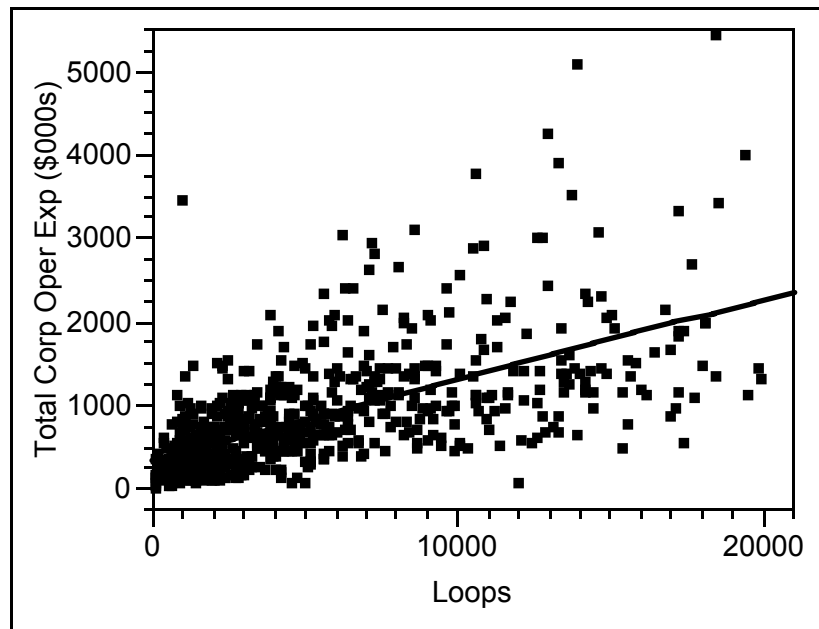
Here, R^2 is only .40. I will focus on this result, as it exemplifies the purported evidence provided by ETI as well as the fallacies of ETI's "inefficiency" argument with respect to RLECs. The R^2 of .40 means that 60% of the variation in overhead costs cannot be accounted for by the size of the company. Absent an explanation for this variability, ETI concludes that it is evidence of "inefficient performance."

ETI then chooses the companies with the lowest 25% of overhead costs within each of 50 groupings of companies (companies with less than 100,000 loops grouped into 2,000 loop intervals) and labels these "best in class" companies.[15] The grouping of companies is cumbersome and unnecessary. The presumed "best in class" group can alternatively be

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[14] Technically, it is only a measure of the percent of variation in the Y variable that is accounted for as a *linear* function of the X variable. Nonlinear functions may produce better fits, but the graph shows that a linear relationship is reasonable to use.

identified as the 25% of the data points with the lowest residuals from the regression line (meaning that they lie the furthest below the average relationship). I will focus on this group to illustrate the errors in the ETI analysis.

Two major shortcomings in the ETI analysis can be readily corrected. First, by focusing on a single year's data, ETI is unable to take into account the variability over time that small companies typically experience in overhead costs.[16] An extreme example is a rate case: these occur infrequently but entail significant overhead costs that will not appear in other years. A company that incurred a rate case in the single year for which data was collected may appear "inefficient," but were data collected for some other year, that same carrier may have been a "best in class." Use of several years of data can average out some of this variability. The second, and more important, shortcoming is that the ETI analysis is conducted at the study area level rather than at the holding company level. As I will show, the ETI "best in class" companies are primarily companies with multiple study areas. In other words, they are really much larger companies, and that is why they have lower overhead costs per line.

Rather than using a single year's data, I used USF cost data submitted to NECA for the years 1999-2003 (inclusive). This resulted in a data set of 681 study areas with under 20,000 lines and with data for all 5 years. Estimation of the least squares regression line between overhead expenses and total loops yields an R^2 of .50. This shows that just by increasing the timeframe of the study from one year to five years, the unexplained variation in overhead costs is reduced from 60% to 50%. However, the second adjustment is even more dramatic.

ETI's "best in class" comparison is, in fact, an illusion. Based on the 2003 data, I selected the study areas with the lowest 25% of the residuals from the regression line (in Figure 3, this entails choosing the 25% of the points that are furthest below the regression

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[15] *Lost in Translation*, at page 39.
[16] This same issue, of time variability, plagues the rate-of-return data cited in the ETI report. Small carriers have lumpy investment patterns, so reliance on a single year's rate of return is not a good indication of their profitability over time.

line). Out of these 170 study areas, only 35 are single exchange study areas.[17] One holding company alone accounts for 46 of the 170 "best in class" study areas (TDS), another for 36 of these study areas (CenturyTel), and a third for 34 of these study areas (Citizens).   Their overhead costs only appear low in comparison with other study areas of similar size because these are really not companies of similar size at the corporate level.[18]

To correct the analysis, I aggregate the study areas by holding company. This results in 421 individual holding companies. Graphing overhead costs versus total loops at the holding company level yields an R^2 of .88 meaning that only 12% of the remaining variability in overhead costs is not explained by company size.   The problem of associated study areas is not completely eliminated through my adjustments, but it substantially explains the apparent variability in overhead costs that ETI is so concerned about.

The extent of the holding company/study area problem extends even further than I have been able to correct for.   The smallest "independent" study areas include: Border to Border Communications (TX), South Park Telephone Company (CO), Scott County Telephone Company (AR), Hat Island Telephone Company (WA), Blackduck (MN), Accipiter (AZ), Agate Mutual (CO), Rico (CO), and Asotin (OR), which all serve less than 200 lines and have widely differing levels of overhead expenses.   Closer examination shows that South Park, Scott County, Hat Island, and Rico in fact share overhead expenses with other telephone companies. These arrangements result from the

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[17] These results are corroborated by examining the bands used in the ETI study. For example, there are 228 study areas with less than 2,000 lines. The top 25% of these (in terms of low overhead costs), or 57 study areas, is actually comprised of 42 study areas associated with holding companies. 37 of the top 40 companies of the 2,000-4,000 loop category are associated with holding companies.

[18] As I discuss in the next section, I do not believe that the common ownership of RLEC study areas should be a consideration with respect to how the support levels of these study areas are calculated *vis a vis* non-affiliated RLECs. Doing so would result in insufficient support for many discrete small, rural study areas that face the same types of operating environments and challenges as non-affiliated carriers. However, in the limited realm of a study of overhead costs, common ownership is a relevant factor since overhead costs are so dependent on company size.

particular histories of these companies and the close relationships that have evolved.[19]
So, even at the holding company level, we will have substantial variation in overhead
costs depending on the companies' relative abilities to share overhead costs with other
providers.

It is instructive to further consider Border to Border.   The company was established in
1994 to provide service to previously unserved areas.   Prior to initiation of service,
Southwestern Bell Telephone required special construction charges to provide service
within the territory now served by Border to Border. Using Rural Utilities Service (RUS)
loans, Border to Border has provided service using Basic Exchange Telephone Radio
Service (BETRS).   As a result of a Texas Public Utility Commission mandate for all
telecommunication customers in Texas to have data rates in excess of 14.4kbps, Border
to Border has been replacing the BETRS equipment using 2.4Ghz Microwave Trunk
Radio operating from its central office site to Digital Loop Carrier (DLC) sites, installing
DLC equipment and placing buried copper cable from the DLC sites to customers that
were receiving service by BETRS equipment. Subsequent to Border to Border installing
the BETRS equipment as a means of providing voice services to its customers, the FCC
has allocated the BETRS frequency spectrum to paging companies for their use. BETRS
equipment manufacturers have discontinued the sale and support of this technology
within the United States. Border to Border is now rolling out one of the few fiber to the
home networks in rural areas of the United States. The RUS is funding this fiber project.
It is important to note that RUS borrowers are not permitted to assess special construction
charges on customers. Thus, repayment of these RUS loans requires universal service
support in order for customers to receive high quality service at affordable rates.   The
"over-earnings" alluded to by ETI are reinvested in the network and have enabled Border
to Border to provide an advanced network in a very sparsely populated region.

Application of ETI's "best in class" benchmarking approach to Western Wireless
suggests that they are an inefficient company themselves.   There are 38

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[19] For example, South Park Telephone Company and Rye Telephone Company are owned by the same
family.

telecommunications companies (wireline and wireless) in the 500,000 to 1,500,000 subscriber range, including Western Wireless (with 1,197,000 subscribers). A graph of their SG&A overhead expenses in relation to total loops (subscribers) reveals that Western Wireless is far from the lowest 25% of these carriers:

Figure 5: Overhead Costs and Loops for Moderate Size Carriers
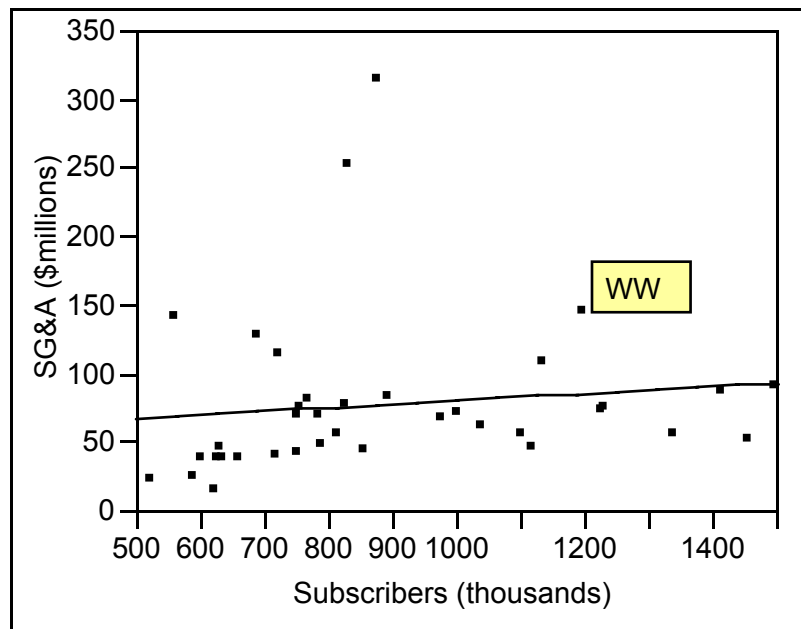
A natural way to test the ETI hypothesis that high cost support leads to inefficiency by RLECs is to model overhead expenses as a function of company size and whether or not the company receives USF. A multiple regression model of overhead costs (after aggregation of study areas to the holding company level) shows that they are a positive function of the number of loops, a positive function of the number of separate exchanges (meaning that overhead costs rise with the number of exchanges, after adjusting for the total number of loops served), and does not appear to be related to whether or not the company receives USF.[20] If the ETI hypothesis were correct, we should observe that

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[20] The coefficient on USF funding is not statistically significant (the p value is .45 meaning that there is a 45% chance that the coefficient could result from sampling variation rather than any real effect due to USF).

receipt of USF leads to higher overhead costs once we adjust for the size of the company. We do not find this result.

Beyond these conceptual issues, the data used in the ETI report is not dependable. I have not attempted to check all of their references or all of the data they report for the highlighted companies, but a few examples suffice to cast doubt on their accuracy:

- The ETI report shows Five Area Telco as among the companies in Texas "claiming the highest overheads" and West Plains as among those "reporting low overheads."[21] These companies are actually related. Five Area purchased 5 former GTE exchanges, creating West Plains as the subsidiary to operate these. NECA subsequently put all of these lines within the same study area. The Texas data shows overheads/month/line of $42.72 for Five Area and $8.18 for West Plains. Since West Plains has 5,570 access lines and Five Area has 1,400 lines, the difference is almost totally explained by the size of the companies. The ETI data on total employees shows 43 employees for Five Area. In actuality this is the total for Five Area, West Plains, and unregulated subsidiaries.

- Big Bend Telephone is singled out by ETI as misreporting USF revenues.[22] What ETI did not investigate is the fact that Big Bend received a one-time adjustment of $4,500,000 due to updated investment studies. ETI labels this as "gross errors are passing unchecked by regulators."

- ETI reports Ottoville Telephone Company as having between 10,000 and 12,000 lines and $1.5 million in overhead.[23] In reality, Ottoville serves around 1,600 lines and has overhead costs of approximately $166,000.[24]

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[21]*Lost in Translation*, Table 5.1, page 51.
[22] *Lost in Translation*, footnote 121.
[23] *Lost In Translation*, page 48.
[24] According to the 2003 NECA USF data, Ottoville serves 1,628 loops. Company sources confirmed the correct loop and corporate expense data.

This list is not meant to be exhaustive. It does, however, cast in doubt the accuracy of the ETI study. Arguably, the conceptual flaws in the study outweigh any inaccuracies in the data.

5. Summary and Conclusions

I have compared the variability of overhead costs among companies in different industries and of companies of varying sizes. It could be argued that these are "apples to oranges" comparisons and, to an extent, that criticism is valid. But it is equally valid to say that rural areas are not one dimensional and should not be compared solely on the basis of size. ETI has provided no evidence of inefficiency. Rather, they have reduced the comparisons between companies to the single dimension of size and found that overhead costs vary considerably after adjusting for size differences.

I have shown their one dimensional analysis to be invalid.   After accounting for holding company size, most of the variability of overhead costs is accounted for. But this is still a one dimensional analysis that does not validly reflect the diversity of rural areas and their telecommunications needs. It is informative to consider an excerpt from the conclusion of a study of the variability of overhead costs among nonprofits (not telecommunications carriers):

> Finally, whatever the source of variation, the observations in this research report caution against uniform application of efficiency standards across all types of nonprofit organizations. While watchdog and advisory groups sound this caution in their literature, it is routinely ignored by journalists and researchers who use the ratios as a means of differentiating efficient from inefficient organizations.[25]

The real lesson, however, of ETI's flawed analysis of overhead costs is that mandatory price cap regulation is inadvisable for the RLECs. The ETI study was purportedly showing how rate-of-return regulation results in inefficient operation by the RLECs. Not

only did they fail to accomplish this, but they offer no evidence that incentive regulation such as price caps would perform any better. The theoretical basis for price cap regulation is that you can meaningfully benchmark firms against other similar firms in order to gauge a reasonable measure of productivity gain (thereby de-linking the regulated firm's revenues from their actual costs). The diversity of rural areas and rural carriers complicates this task severely, however. RLECs differ among one another in a variety of ways to an extent that renders this benchmarking spurious, just as was ETI's attempt to benchmark overhead costs solely based on company size.

Ironically, Lee Selwyn, President of ETI, has publicly stated that price cap regulation does not work:[26]

> Price cap regulation as implemented at both the state and federal levels does not eliminate inefficiencies in ILEC operations nor prevent ILECs from engaging in cross-subsidization….Price cap regulation thus works to *facilitate*, rather than to prevent, cross-subsidization, predatory pricing, and other anticompetitive conduct by ILECs, and thus demands more, not less, oversight of ILEC business practices. (emphasis in original)

More critically, the most thorough and balanced review of price cap regulation cautions against its potential inconsistencies with universal service:

> If universal service and fair prices are of paramount importance, the policy [price caps] is unlikely to be a good one.[27]

ETI has failed to provide evidence of RLEC inefficiency and they have failed to provide evidence that price cap regulation or wholesale consolidation would offer any improvement. The FCC itself has found that rate-of-return carriers "have fewer

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[25]Hager, Pollak, and Rooney, *Variations in Overhead and Fundraising Efficiency Measures: The Influence of Size, Age, and Subsector*, working paper of the Association for Research on Nonprofit Organizations and Voluntary Action, 2002.

[26] Declaration of Lee Selwyn, on behalf of AT&T Corp. before the Federal Communications Commission, WC Docket No. 03-173, December 16, 2003, at page 69. I do not share Dr. Selwyn's specific criticisms of price cap regulation and how it has worked for the RBOCs. I cite it here to underscore the fact that the authors of the ETI study have provided no evidence that price cap regulation would be superior to rate-of-return regulation. In fact, they have not addressed the concerns raised by their own president.

opportunities than large price cap carriers to achieve cost savings because of their limited size, their lumpy investment patterns, and fluctuating operating expenses."[28] Nonetheless, some RLECs have been able to reduce overhead costs through sharing personnel with other companies. However, for the reasons given below, forced consolidations would be poor universal service policy.

A number of considerations make forced consolidation of RLECs bad for rural America. Among these:

- Costs are only half the equation. Quality of service also matters. There is no evidence that consolidation would improve service quality. In fact, the evidence points in the other direction.[29] For example, the evidence shows that the RLECs have deployed state of the art facilities and services to rural areas fairly ubiquitously.[30]

- The same logic that advocates sharing of overhead costs could be applied to sharing of other costs. Universal service costs could be drastically reduced if rural residents would share their lines, thereby saving on the large outside plant costs of serving sparsely populated regions. In fact, we had such a system – it

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[27] Sappington, D.S. and Weisman, D.L*., Designing Incentive Regulation For the Telecommunications Industry*, MIT Press and AEI Press, 1996, at page 101.
[28] *Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers*, CC Docket No. 00-256, Second Report and Order and Further Notice of Proposed Rulemaking, *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Fifteenth Report and Order, *Access Charge Reform for Incumbent Local Exchange Carriers Subject to Rate-of-Return Regulation*, CC Docket No. 98-77, Report and Order, *Prescribing the Authorized Rate of Return for Interstate Services of Local Exchange Carriers*, CC Docket No. 98-166, Report and Order, 16 FCC Rcd 19613, 19652-19653, para. 86 (2001).
[29] See, for example, D.E. Lehman, *Who Will Serve Rural America?*, NTCA White Paper, July 2000.
[30] OPASTCO's membership survey released May 10, 2004 finds that 88% of the responding RLECs' customers have advanced services available to them (with an estimated subscription rate of 12.8%). NTCA's 2004 Broadband/Internet Availability Study, released June 29, 2004, finds that 92% of the surveyed companies offer broadband services and that these services are available to 74% of their customers (with a subscription rate of 10%). These numbers compare favorably with the latest FCC data ("High-Speed Services for Internet Access: Status as of December 31, 2003," FCC, issued June 2004) which finds that 93.2% of the zip codes nationwide have at least one broadband subscriber, but only 73.5% of the more sparsely populated zip codes (< 6 persons/mi^2) and 82.7% of the somewhat more densely populated rural zip codes (6 -15 persons/mi^2). The FCC and OPASTCO/NTCA data are not directly comparable since the FCC reports zip codes where there is at least one broadband subscriber and not how many of the subscribers in those zip codes are capable of receiving broadband services. Since the coverage

was called *party lines* and universal service policy was largely responsible for its deserved eradication.

- Community-based rural telephone companies keep jobs in rural areas and promote the national interest in maintaining economically viable rural communities. Managerial positions in these community-based companies are among the best in rural areas. Economic development depends on both physical and human infrastructures.[31] Keeping these skilled jobs in rural areas provides reasons for skilled people to stay or move to these communities which, in turn, helps attract businesses that depend on a skilled labor force, thereby creating a virtuous cycle. The U.S. Department of Agriculture reports that the average annual earnings per utilities job was $66,631, more than $20,000 higher than any other job category. While these jobs are relatively small in number (0.5% of the nonmetro total), they are among the most skilled jobs in rural areas.[32]

- Consolidation means less local management, less local customer support, and a decreased ability to tailor strategy to each particular rural community. This may make sense in some cases, but should not be forced on all rural areas. Community-based RLECs already merge, acquire, sell their exchanges, and share resources, but these decisions are dictated by local market conditions. It makes no sense to demand that a company share management when there may be no other carriers with which to share. (Border to Border, Scott County, and South Park were created to provide service to areas that were unserved – who would these companies share management with?)

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data appears similar in magnitude in all these sources, it is almost surely the case that RLECs have deployed broadband services more widely than their large company counterparts.

[31] The literature on rural economic development is voluminous. One study of particular interest comes from the UK: *Teleworking and Rural Development*, by Huws, Honey, and Morris, Rural Development Commission, 1997. This study investigates the determinants of business and employment location, finding that proximity to other high-tech businesses and labor pools is a prime determinant of where a high-tech firm will decide to locate. The study points to good development potential for rural areas close to urban areas, but is much more pessimistic about isolated rural areas.

[32] USDA, 2001, Nonmetro Jobs and Earnings, www.ers.usda.gov/Emphases/Rural/Gallery/EarningsTable.htm. A case in point: the Kerrville exchange in Texas was purchased by Valor Telecom. Previous local managerial positions moved to Irving, Texas.

The impetus to consolidate rural service areas is misguided. It will further isolate rural communities, robbing them of access to local educational institutions, vital jobs and expertise, and relegating them to a one-size-fits-all mentality that is bad for rural people and businesses.

The potential savings through consolidation are largely illusory. Larger service areas would result in de facto decreases in universal service funding but not because the costs are reduced. Larger service areas simply average out relatively high cost communities and subscribers with relatively low cost ones. In the extreme, all USF would disappear if we were to consolidate the entire ILEC industry into a single service area (by definition, this company would have the national average cost of provision). This was largely the situation prior to AT&T's divestiture. Nonrural carriers already have this problem. They are either ineligible to receive USF or receive inadequate support for their highest cost subscribers due to this averaging effect.[33] ETI's suggestion is simply a blueprint for insufficiency of USF. We should not broaden the scope of this problem by extending such a policy to rural telephone companies. RLECs do not have the urban cores of non-rural carriers that might enable them to "internally average" their support amounts. This is true regardless of whether or not the RLEC is affiliated with a holding company.

Ironically, there is one inescapable conclusion as a result of the ETI study. It clearly demonstrates the invalidity of the Western Wireless position that:

> To ensure a level competitive playing field, in which the universal service system gives neither ILECs nor competitors artificial advantages, all carriers must receive identical amounts of support per customer they serve.[34]

If ETI is correct and RLECs are wasting resources, then there is no need for their competitors to receive the same level of funding. Competitive neutrality does not

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[33] The current USF would increase by an order of magnitude if each wire center were designated as the study area. Essentially, companies serving larger study areas provide support for their higher cost customers by charging more to their lower cost customers. This is not sustainable in a competitive environment.

[34] Western Wireless, "Competitive Universal Service: Myths and Realities," June 2003.

demand that CETCs receive funds that incumbents are "wasting." If they receive funds geared only to their efficient provision of service, they can compete fairly with a purportedly inefficient incumbent. Not only have CETCs not demonstrated their need for support at all, but the ETI position clearly implies that the equal support policy is unwarranted.

ETI's evidence of RLEC inefficiency is based on false premises (that overhead costs should not vary much, except for size), false evidence (that the companies with the lowest overhead costs are really more efficient providers, when they are really just part of a commonly-owned group of RLECs), and result in false conclusions (that universal service policy would be improved by eliminating rate-of-return regulation). Rate-of-return regulation is a red herring. Western Wireless' purpose is to divert attention from the real growth of the USF – the CETCs. The real story of the growth in universal service funds has been "lost in translation" by ETI's analysis.

Appendix 1

TITLE 47--TELECOMMUNICATION
CHAPTER I--FEDERAL COMMUNICATIONS COMMISSION (CONTINUED)
PART 32--UNIFORM SYSTEM OF ACCOUNTS FOR TELECOMMUNICATIONS COMPANIES

Subpart E--Instructions for Expense Accounts

Sec. 32.6720 General and administrative.

This account shall include costs incurred in the provision of general and administrative services as follows:

(a) Formulating corporate policy and in providing overall administration and management. Included are the pay, fees and expenses of boards of directors or similar policy boards and all board-designated officers of the company and their office staffs, e.g., secretaries and staff assistants.

(b) Developing and evaluating long-term courses of action for the future operations of the company. This includes performing corporate organization and integrated long-range planning, including management studies, options and contingency plans, and economic strategic analysis.

(c) Providing accounting and financial services. Accounting services include payroll and disbursements, property accounting, capital recovery, regulatory accounting (revenue requirements, separations, settlements and corollary cost accounting), non-customer billing, tax accounting, internal and external auditing, capital and operating budget analysis and control, and general accounting (accounting principles and procedures and journals, ledgers, and financial reports). Financial services include banking operations, cash management, benefit investment fund management (including actuarial services), securities management, debt trust administration, corporate financial planning and analysis, and internal cashier services.

(d) Maintaining relations with government, regulators, other companies and the general public. This includes:

(1) Reviewing existing or pending legislation (see also Account 7300, Nonoperating income and expense, for lobbying expenses);

(2) Preparing and presenting information for regulatory purposes, including tariff and service cost filings, and obtaining radio licenses and construction permits;

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(3) Performing public relations and non-product-related corporate image advertising activities;

(4) Administering relations, including negotiating contracts, with telecommunications companies and other utilities, businesses, and industries. This excludes sales contracts (see also Account 6611, Product management and sales); and

(5) Administering investor relations.

(e) Performing personnel administration activities. This includes:

(1) Equal Employment Opportunity and Affirmative Action Programs;

(2) Employee data for forecasting, planning and reporting;

(3) General employment services;

(4) Occupational medical services;

(5) Job analysis and salary programs;

(6) Labor relations activities;

(7) Personnel development and staffing services, including counseling, career planning, promotion and transfer programs;

(8) Personnel policy development;

(9) Employee communications;

(10) Benefit administration;

(11) Employee activity programs;

(12) Employee safety programs; and

(13) Nontechnical training course development and presentation.

(f) Planning and maintaining application systems and databases for general purpose computers.

(g) Providing legal services: This includes conducting and coordinating litigation, providing guidance on regulatory and labor matters, preparing, reviewing and filing patents and contracts and interpreting legislation. Also included are court costs, filing fees, and the costs of outside counsel, depositions, transcripts and witnesses.

(h) Procuring material and supplies, including office supplies. This includes analyzing and evaluating suppliers' products, selecting appropriate suppliers, negotiating supply contracts, placing purchase orders, expediting and controlling orders placed for material, developing standards for material purchased and administering vendor or user claims.

(i) Making planned search or critical investigation aimed at discovery of new knowledge. It also includes translating research findings into a plan or design for a new product or process or for a significant improvement to an existing product or process, whether intended for sale or use. This excludes making routine alterations to existing products, processes, and other ongoing operations even though those alterations may represent improvements.

(j) Performing general administrative activities not directly charged to the user, and not provided in paragraphs (a) through (i) of this section. This includes providing general reference

libraries, food services (e.g., cafeterias, lunch rooms and vending facilities), archives, general security investigation services, operating official private branch exchanges in the conduct of the business, and telecommunications and mail services. Also included are payments in settlement of accident and damage claims, insurance premiums for protection against losses and damages, direct benefit payments to or on behalf of retired and separated employees, accident and sickness disability payments, supplemental payments to employees while in governmental service, death payments, and other miscellaneous costs of a corporate nature. This account excludes the cost of office services, which are to be included in the accounts appropriate for the activities supported.

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